

REMARKS

I. Claims in the Case

Claims 5 and 36 have been canceled without prejudice. Independent claims 33, 35 and 38 have been amended to introduce the specific targeting ligands found to be patentable in the Office Action dated April 24, 2002. Previously allowed claims 6, 8, 10, 15, 21, 23 and 37 have been amended to change their dependency. Claims 2-4, 6-35 and 37-41 and 52-55 are currently pending.

II. Remarks Regarding Pending Obviousness Rejections

In the subject Action, the section 103 rejection of claims 2-5 and 33-38 were maintained, and the remaining claims, claims 6-32, 39-41 and 52-55, were objected to as depending from a rejected base claim. While the Applicants continue to maintain that the subject matter of all of the previously pending claims is patentable, and reserves the right to seek protection for the broader subject matter in related cases, the claims have been amended to place the case into condition for allowance.

Thus, rejected base claims 33, 35 and 38 have been amended to introduce the specific tissue specific ligands found to be patentable, including “anticancer agent” ligands (dependent claim 6), ligands that target tumor cells (“tumor markers”, dependent claim 8), “tumor apoptotic cell targeting ligand” or “tumor hypoxia targeting ligands” (dependent claim 15), “glutamate pentapeptide” (dependent claim 21) , or “agents that mimic glucose” (dependent claim 23). All of the claims should now be in condition for allowance.

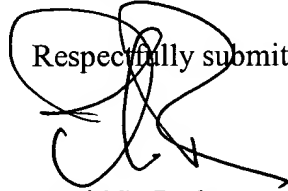
III. Remarks Concerning Related Case

In Applicants’ pending related case, USSN 09/434,313, of which the present case is a division/CIP, the Examiner recently introduced a rejection under 102(a) against a series of references of Yang *et al.* that are of record in the present case but have not been raised in the present prosecution. In the parent ‘313 case, Applicants submitted a disclaiming declaration to

demonstrate that those references are not "publications by another" and therefore not available under 102(a). To complete the record here, Applicants are providing herewith a copy of the disclaiming declaration made of record in the parent.

Also in the parent case, the Examiner recently entered a rejection against newly cited art, and this art has also not been cited in the present case. Applicants contend that this art is not relevant to patentability here, generally for the reasons set forth in the '313 prosecution. In any event, the subject matter that is being prosecuted for allowance here is very similar to that found allowable in the '313 case over these newly cited references. See, *e.g.*, claims 6-14 and 16-22 of the '313 case, found to be allowable over the newly cited third party references. Thus, it is believed that this newly cited art should have no bearing on the prosecution of the present case.

Respectfully submitted,



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Marked Claim Amendments

5. ~~The method of claim 35, wherein said tissue specific ligand is an anticancer agent, DNA topoisomerase inhibitor, antimetabolite, tumor marker, folate receptor targeting ligand, tumor apoptotic cell targeting ligand, tumor hypoxia targeting ligand, DNA intercalator, receptor marker, peptide, nucleotide, organ-specific ligand, antibiotic, antifungal, antibody, glutamate pentapeptide or an agent that mimics glucose.~~

6. (Twice Amended) The method of claim 335, wherein said tissue specific ligand is an anticancer agent.

8. (Twice Amended) The method of claim 335, wherein said tissue specific ligand is a tumor marker.

10. (Twice Amended) The method of claim 335, wherein the tissue specific ligand is a folate receptor targeting ligand.

15. (Twice Amended) The method of claim 335, wherein the tissue specific ligand is a tumor apoptotic cell targeting ligand or a tumor hypoxia targeting ligand.

21. (Twice Amended) The method of claim 335, wherein the tissue specific ligand is glutamate pentapeptide.

23. (Twice Amended) The method of claim 335, wherein the tissue specific ligand is an agent that mimics glucose.

33. (Once Amended) A method of synthesizing a radiolabeled ethylenedicycysteine derivative for imaging comprising the steps:

- a) obtaining a tissue specific ligand, wherein the tissue specific ligand is an anticancer agent, a tumor marker, a folate receptor targeting ligand, a tumor apoptotic cell targeting ligand, a tumor hypoxia targeting ligand, glutamate pentapeptide, or an agent that mimics glucose;
- b) admixing said ligand with ethylenedicycysteine (EC) to obtain an EC-tissue specific ligand derivative; and

- c) admixing said EC-tissue specific ligand derivative with a radionuclide and a reducing agent to obtain a radionuclide labeled EC-tissue specific ligand derivative, wherein the EC forms an N_2S_2 chelate with the radionuclide.

35. (Once Amended) A method for labeling a tissue specific ligand for imaging, comprising the steps:

- a) obtaining a tissue specific ligand, wherein the tissue specific ligand is an anticancer agent, a tumor marker, a folate receptor targeting ligand, a tumor apoptotic cell targeting ligand, a tumor hypoxia targeting ligand, glutamate pentapeptide, or an agent that mimics glucose;
- b) admixing the tissue specific ligand with ethylenedicysteine (EC) to obtain an EC-ligand drug conjugate; and
- c) reacting the drug conjugate with ^{99m}Tc in the presence of a reducing agent to form an N_2S_2 chelate between the ethylenedicysteine (with or without linker) and the ^{99m}Tc .

36. ~~The method of claim 35, wherein the tissue specific ligand is an anticancer agent, DNA topoisomerase inhibitor, antimetabolite, tumor marker, folate receptor targeting ligand, tumor apoptotic cell targeting ligand, tumor hypoxia targeting ligand, DNA intercalator, receptor marker, peptide, organ specific ligand, antibiotic, antifungal, glutamate pentapeptide or an agent that mimics glucose.~~

37. The method of claim ~~35~~36, wherein the reducing agent is a dithionite ion, a stannous ion or a ferrous ion.

38. (Once Amended) A method of imaging a site within a mammalian body comprising the steps of administering an effective diagnostic amount of a composition comprising a ^{99m}Tc labeled ethylenedicysteine-tissue specific ligand conjugate and detecting a radioactive signal from the ^{99m}Tc localized at the site, wherein the tissue specific ligand is an anticancer agent, a tumor marker, a folate receptor targeting ligand, a tumor apoptotic cell targeting ligand, a tumor hypoxia targeting ligand, glutamate pentapeptide, or an agent that mimics glucose.